

**NEBRASKA WATER SUSTAINABILITY FUND
2026 ANNUAL REPORT
WSF APPLICATION NO. 10014
LOWER PLATTE NORTH NRD**

**Developing a Truly Sustainable Solution to Nitrate Contamination
in the Drinking Water Supply throughout Lower Platte North NRD**

Description of the Project / Annual Report 2026

The Water Sustainability Fund (WSF) grant for the Lower Platte North NRD (LPNNRD) was approved in December 2022 for \$388,500 with grant funding of \$233,100 as a cost share program along with a hydrogeologic assessment. LPNNRD has a range of management and education requirements for the nitrate phase area. Even with these requirements nitrate contamination continues to increase, threatening the drinking water supplies for both rural and urban residents. The solutions to these problems are input intensive and provide very little economic gain for producers. Without cost share opportunities to offset the cost of the best management practices nitrates in the groundwater will continue to increase. LPNNRD rules and regulations do not allow for the kinds of restrictions regulating fertilizer application and irrigation until a Phase IV area is declared, 50% of wells +15ppm. By this time the level of nitrates in the groundwater will be high enough to constitute an emergency. Decreasing the nitrates in the groundwater supply before they reach this level is a far less expensive option than continuing the current path which will require heavy handed restrictions and the development of treatment facilities to ensure a safe drinking water supply. Treating the root cause of the issue before it becomes an emergency lead to true sustainability of the water resource.

The hydrogeologic assessment completed in 2023-24 defined the bedrock layer, which is the bottom layer of the model grid placed into MODFLOW. The top five layers are derived from AEM (completed in 2021), the sixth layer is derived from the hydrogeologic assessment. The hydrogeologic assessment will also aid the contractor in 'filling gaps' in the AEM flights. With the information from the assessment the NRD is in the process of data collection utilizing a simpler version of AEM called Ttem. This process utilizes a 4-wheeler pulling a machine to collect geological information.

The best management practices that have been offered are Iron Chlorosis – for the purpose of neutralizing the PH so crop rotations can be utilized, Cover Crops – to help in the uptake of residual nitrogen, Fertigation – to allow for split applications of nitrogen, Variable Rate Nitrogen – to allow for nitrogen application on right part of the field when the crop needs it, Gravity to Pivot/SDI conversion – over irrigation can contribute to nitrate leaching, Grid Soil Sampling – to assist in variable rate nitrogen management, Soil Moisture Sensors – to determine when irrigation is needed, and Water Flow Meters – manage the amount of water being pumped.

PROJECT PROGRESS APRIL 2025 TO MARCH 2026:

Cost-share practices continue with public meetings, email blasts and letter reminders to all the producers in the area. The NRCS has assisted in collecting cost share applications along with signing

up producers through their programs. At the present time the NRD has received 217 flow meter cost share applications and 9 gravity to SDI/pivot conversions. Four of the applications for pivot conversions did not follow through, but one additional signup occurred in the fall of 2025. One of the original applications has been approved while other applications are being reviewed within the 2026 NRCS EQIP funding. Applications in previous years have been for cover crops, soil moisture sensors, iron chlorosis and chemigation equipment.

At the present time, producers have completed the following:

- Installation of more than 200 flow meters.
- 4 gravity to pivot conversions.
- 2 gravity to SDI systems.
- Cost share on 238 acres of cover crops
- Utilization of an Iron Chlorosis product on 135 acres
- 4 sites for Chemigation Equipment
- Installation of soil moisture sensors on 2 fields

Staff have worked one-on-one with a fourth of the producers on reducing nitrogen applications and continued hosting meetings at the Schuyler library for awareness and reporting. The NRD has been utilizing email blasts to get additional and timely information out to the public. Staff have taken any opportunity to educate within the schools and offer water sampling program for all the citizens not receiving water from a community system.

This last year was a wet year, so a lot of wells were not utilized, and water use information has been limited along with 2025 nitrate results. Staff have been working with producers on well decommissioning along with doing paperwork on active wells that are physically not there. The NRD utilizes hydrogeological assessment maps to determine aquifer vulnerability and compare it to nitrate results. The NRD collected samples for other contaminants and found levels of uranium within this area.

ANTICIPATED ACTIVITIES FROM NOW UNTIL NEXT ANNUAL REPORT DUE APRIL 1, 2027:

The LPNNRD will wrap up applications for cost share items and will be contacting producers that do not have flow meters installed. Some current issues are flow meters are delayed for 4 to 6 weeks so installation has been a challenge. The NRD plans on working with the producer for an irrigation conversion practice if approved by NRCS. LPNNRD will continue public outreach at local events and direct mailing of pertinent information. The NRD will be working with DWEE on nitrogen reducing programs for the producers. Additional information collected on the geological information and age dating project with USGS and LLNRD will be distributed to the public.

LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 10014 WILL BE REALIZED:

Some of the best management cost share practices will be completed as federal funding has increased. The plan was to have grant completed by end of 2025 but as some of the best management practices were delayed, the plan is to have the grant completed by the end of 2026.